

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 – 39. (cancelled)

40. (previously presented) A process for disrupting a filter cake in an underground formation, which process comprises:

(a) incorporating into a drilling fluid a solid polymer capable of being converted by hydrolysis into one or more organic acids;

(b) using the drilling fluid to drill a wellbore into the underground formation such that the solid polymer in the drilling fluid contributes to the formation of a filter cake; and

(c) allowing the solid polymer to hydrolyse in the presence of water and to disrupt the integrity of the filter cake.

41. (previously presented) A process according to claim 40 wherein the solid polymer is a polyester.

42. (previously presented) A process according to claim 40 wherein the solid polymer is an aliphatic polyester.

43. (previously presented) A process according to claim 40 wherein the solid polymer is a polymer which comprises one or more of lactic acid, lactide, glycolic acid, glycolide, caprolactone and (optionally) other hydroxy, carboxylic acid or hydroxy-

carboxylic acid compounds which may condense with lactic acid, lactide, glycolic acid, glycolide or caprolactone.

44. (previously presented) A process according to claim 40 wherein the solid polymer is a polymer which produces one or more organic acids on hydrolysis.

45. (previously presented) A process according to claim 40 wherein the solid polymer is a polymer which produces lactic acid or glycolic acid on hydrolysis.

46. (previously presented) A process according to claim 40 wherein the solid polymer is in the form of a sphere, cylinder, cuboid, fibre, powder or bead, or other configuration.

47. (previously presented) A process according to claim 40 wherein the acid produced by hydrolysis of the solid polymer dissolves acid soluble material present in the filter cake or adjacent formation.

48. (previously presented) A process according to claim 40 wherein the drilling fluid comprises the solid polymer in an amount of from 1 to 25% v/v.

49. (previously presented) A process according to claim 40 wherein the drilling fluid further comprises a polymer breaker or the solid polymer further comprises a polymer breaker.

50. (previously presented) A process according to claim 40 wherein the process further comprises displacing the drilling fluid with a fluid comprising a polymer breaker.

51. (previously presented) A process according to claim 49 wherein the polymer breaker is a hydrolase enzyme.

52. (previously presented) A process according to claim 49 wherein the polymer breaker is a polysaccharide hydrolysing enzyme.

53. (previously presented) A process according to claim 49 wherein the polymer breaker is an enzyme which can hydrolyse starch, xanthan, cellulose, guar, scleroglucan or succinoglycan or a derivative of any one of these polymers.

54. (previously presented) A process according to claim 49 wherein the polymer breaker is an oxidant.

55. (previously presented) A process according to claim 54 wherein the polymer breaker is an oxidant selected from persulphate, hypochlorite, peroxide, perborate, percarbonate, perphosphate, persilicate, metal cation and hydrogen peroxide adduct.

56. (previously presented) A process according to claim 49 wherein the polymer breaker is in the form of a delayed release preparation.

57. (previously presented) A process according to claim 49 wherein the or each polymer breaker is incorporated into the solid polymer by (a) encapsulation, to allow its or their controlled release coincident with or after acid production; or (b) dissolution or dispersion, to allow its or their controlled release coincident with acid production.

58. (previously presented) A process according to claim 40 wherein the solid polymer or drilling fluid and consequent filter cake further comprises calcium peroxide and wherein acid produced by hydrolysis of the solid polymer leads to the generation of hydrogen peroxide.

59. (currently amended) A process according to claim 40 wherein the solid polymer, or drilling fluid ~~or solids free fluid~~ further comprises ammonium bifluoride and wherein acid produced by hydrolysis of the solid polymer leads to the generation of hydrogen fluoride.

60. (previously presented) A process according to claim 40 wherein the drilling fluid further comprises calcium sulphate as a bridging agent.

61. (previously presented) A process according to claim 49 wherein the polymer breaker is present in an amount sufficient to further disrupt the integrity of the filter cake.

62. (previously presented) A process according to claim 40 wherein the underground formation contains hydrocarbon or water and wherein the process further comprises recovering a hydrocarbon or water from the treated formation.

63. (previously presented) A process according to claim 40 wherein the solid polymer further comprises one or more other materials incorporated into the solid polymer by dissolution dispersion or encapsulation.

64. (previously presented) A process according to Claim 63 wherein the one or more other materials are selected from polymer breakers, specific gravity adjusting materials, calcium peroxide and ammonium bifluoride.

65. (previously presented) A drilling fluid suitable for drilling into an underground formation which contains as a bridging agent one or more solid polymers capable of being converted by hydrolysis into one or more organic acids.

66. (previously presented) A drilling fluid according to claim 65 wherein the solid polymer is a polyester.

67. (previously presented) A drilling fluid according to claim 65 wherein the or each solid polymer is as defined.

68. (previously presented) A drilling fluid according to claim 65 wherein the solid polymer hydrolyses in the presence of water and disrupts a filter cake incorporating the solid polymer.

69. (previously presented) A drilling fluid according to claim 68 wherein acid produced by hydrolysis of the solid polymer further disrupts a filter cake by reacting with acid soluble material present in the filter cake or adjacent formation.

70. (new) A process according to claim 50 wherein the fluid used to displace the drilling fluid further comprises ammonium bifluoride and wherein acid produced by hydrolysis of the solid polymer leads to the generation of hydrogen fluoride.

71. (new) A process according to claim 40 wherein the drilling fluid is water-based, oil-based, hydrocarbon-based or liquid ester-based.

72. (new) A process according to claim 40 wherein the process further comprises displacing the drilling fluid with a fluid comprising a conventional filter cake disrupting agent other than a polymer breaker.

73. (new) A process according to claim 72 wherein the conventional filter cake disrupting agent is selected from acids, combinations of esters and ester hydrolysing enzymes, and chelating agents.

74. (new) A process according to claim 50, 72 or 73 wherein the fluid used to displace the drilling fluid is an aqueous fluid.